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May 12, 2004

TO: **Examiner Tung Vo**

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From: Douglas McAllister
Total Number of Pages, including this page: _9_

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OFFICIAL FACSIMILE

Re: U.S. Patent Application No. 09/735,147
    Filed: December 12, 2000
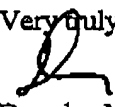   **TERMINAL FOR COMPOSING AND PRESENTING MPEG-4 VIDEO
    PROGRAMS**
    Our Ref.: GIC-531

Dear Examiner Vo:

As discussed, enclosed for entry in connection with the above-referenced patent application is a Response to the Office Action mailed on February 13, 2004.

Once you have reviewed the enclosed Response, please telephone me to discuss any issues that may remain in order to place this application in condition for allowance.

Very truly yours,

Douglas M. McAllister
Registration No. 37,886

Enclosures

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P A T E N T

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
G. Rajan	) Examiner: Tung Vo
	)
Serial No.: 09/735,147	) Art Unit: 2613
	)
Filed: December 12, 2000	)
	)

For: **TERMINAL FOR COMPOSING AND PRESENTING MPEG-4 VIDEO PROGRAMS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Dear Sir:

This Response is responsive to the Office Action mailed on February 13, 2004. Claims 1-21 are pending in the application.

Claims 1-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Eleftheriadis (US 6,092,107).

Applicants respectfully traverse these rejections in view of the comments which follow.

Discussion of Eleftheriadis

Eleftheriadis discloses a system for interfacing MPEG-coded audiovisual objects. The Examiner has equated the elements of Figure 2 of Eleftheriadis with the elements of Applicant's claims. In particular, the Examiner has indicated that: (1) the MPEG application 100, the Java Virtual Machine and Java Media Framework (JVM and JMF) 110, the authoring API 290 and the functionality API 295 are equivalent to Applicant's claimed

Serial No.: 09/735,147   **-2-**

terminal manager; (2) the BIFS Decoder and Scene Graph 225 are equivalent is equivalent to Applicant's claimed composition engine; (3) the decoders 270, 271, and 272 are equivalent to Applicant's claimed content decoders; and (4) the compositor 282 is equivalent to Applicant's claimed presentation engine (Office Action, pages 2-3).

In order for a claim to be anticipated under 35 U.S.C. § 102, each and every element of the claimed invention as set forth in the claim must be disclosed in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. Applicant respectfully submits that the arrangement and function of the system disclosed in Eleftheriadis is substantially different than that of the present invention, and that the rejection under 35 U.S.C. § 102(e) is therefore improper.

For example, with Applicant's claimed invention, the composition engine recovers scene descriptor information from the bitstream that defines specific ones of the recovered multimedia objects that are to be provided in the multimedia scene, and characteristics of the recovered multimedia objects in the multimedia scene. The terminal manager recovers object descriptor information from the bitstream that associates the recovered multimedia objects with respective ones of the elementary streams, and provides the recovered object descriptor information to the composition engine. In response to the recovered object descriptor information provided thereto and the recovered scene description information, the composition engine creates a list of the specific ones of the recovered multimedia objects that are to be displayed in the multimedia scene. The presentation engine obtains this list from the composition engine, and, in response thereto, retrieves the corresponding decoded multimedia objects from the content decoders to provide data corresponding to the multimedia scene to an output device.

Serial No.: 09/735,147   **-3-**

The Examiner has indicated that the MPEG application 100, the Java Virtual Machine and Java Media Framework (JVM and JMF) 110, the authoring API 290 and the functionality API 295 of Eleftheriadis <u>taken together</u> are equivalent to Applicant's claimed terminal manager (Office Action, page 2). The Examiner has also indicated that Eleftheriadis discloses that "said terminal manager (100, 110, 290, and 295 of fig. 2) recovers object descriptor information (SCENE GRAPH API 210, 235) from the bitstream (230, 165 of fig. 2) that associates said recovered multimedia objects (295, 401-405 of fig. 4) with respective ones of said elementary streams (431 (255, 256, 257) of fig. 4) . . ." (Office Action, page 3). Applicant respectfully disagrees with the Examiner's characterization of Applicant's claimed terminal manager.

In particular, Eleftheriadis does not disclose or remotely suggest that <u>object descriptor information which associates recovered multimedia objects with respective ones of the elementary streams</u> is recovered by the MPEG application 100 or the JVM and JMF 110 <u>from the bitstream</u>. Contrary to the Examiner's assertions, line 235 of Figure 2 of Eleftheriadis does not indicate the recovery of <u>object descriptor information</u> at MPEG application 100 or JVM and JMF 110 from the bitstream. Line 235 leads from demux 165 to BIFS decoder and scene graph 225 (which the Examiner has equated with Applicant's composition engine). <u>Line 235 does not lead to MPEG application 100 or JVM and JMF 110</u>. Further, Eleftheriadis does not specifically describe what is carried on line 235. Eleftheriadis indicates that the depacketized and separated bitstream consists of portions that contain the <u>scene description information</u> which is sent to BIFS decoder and Scene graph 225, presumably via line 235 (Col. 2, lines 19-22). There is simply no disclosure or suggestion in Eleftheriadis that <u>object descriptor information</u> is

Serial No.: 09/735,147   -4-

carried on line 235 to MPEG application 100 and JVM and JMF 110, as apparently assumed by the Examiner.

The differences between Eleftheriadis and the present application are readily apparent when comparing Applicants' Figure 1 embodiment and Figure 2 of Eleftheriadis. At first glance, these Figures seem similar. However, there are several differences. For example, in Applicants' Figure 1, multimedia objects of the elementary streams are recovered by content decoders 130, scene description information (BIFS stream) of the elementary streams are recovered by the composition engine 120, and object descriptor information is recovered by the terminal manager 110. In contrast, as shown in Figure 2 of Eleftheriadis, information from the bitstream is passed via lines 240, 245, and 250 from the DEMUX 165 to the buffer, and via lines 255, 256, and 257 from the buffer to the decoders 270, 271, and 272. Line 235 of Eleftheriadis presumably carrys scene graph information obtained by the DEMUX 165 from the bitstream to BIFS decoder and scene graph 225 (which the Examiner has equated with Applicants' claimed terminal manager). However, there is no input to the MPEG application 100 or JVM and JMF 110 from DEMUX 165 of Eleftheriadis. Therefore, no object descriptor information is recovered at MPEG application 100 or JVM and JMF 110 from the bitstream in Eleftheriadis, as in Applicants' claimed invention.

Eleftheriadis merely indicates that MPEG application 100 and JVM and JMF 110 interface with Scene Graph API 210. There is no disclosure or suggestion in Eleftheriadis that Scene Graph API 210 provides MPEG application 100 and JVM and JMF 110 with object descriptor information as asserted by the Examiner.

Eleftheriadis simply does not discuss object descriptor information which associates recovered multimedia objects with a respective elementary stream which is recovered from the bitstream by a terminal manager, as claimed by Applicants.

Serial No.: 09/735,147   -5-

The Examiner also indicates that Eleftheriadis discloses that "the composition engine (225 of fig. 2) is responsive to said recovered object descriptor information (406-410 of fig. 10) provided thereto and said recovered scene description information for creating a list of said specific ones of the recovered multimedia objects that are to be displayed in said multimedia scene (API, Application Programming Interfaces, 295 of Fig. 4, Col. 8-14)" (Office Action, page 3). Contrary to the Examiner's assertions, the API 295 of Eleftheriadis is an <u>application</u> that is responsive to <u>user inputs at user interface 140</u>, and is not equivalent to a list <u>created at the composition</u> engine in response to <u>object descriptor information recovered from the bitstream by a terminal manager and scene description information recovered from the bitstream at the composition engine</u>.

Reference numerals 401-405 of API 295 shown in Figure 4 of Eleftheriadis, which are communicated on lines 406-410 do <u>not</u> denote <u>object descriptor information recovered from the bitstream</u> as apparently assumed by the Examiner. Reference numerals 401-405 of Eleftheriadis denote <u>interfaces</u> for trick mode (401), directional (402), transparency (403), hot object (404), and progressive (405) <u>functions</u> which <u>are part of API 295</u>. API 295 is responsive to user inputs at interface 140 of Eleftheriadis. Therefore, interfaces 401-405 of Eleftheriadis are clearly not equivalent to Applicants' claimed <u>object descriptor information that is recovered from the bitstream</u>, <u>but are rather separate interfaces of API 295 which are controlled by user input</u>.

There is no disclosure or suggestion in Eleftheriadis that object descriptor information is passed from MPEG application 100 and JVM and JMF 110 to BIFS decoder and scene graph 225. Further, there is no disclosure or suggestion that the BIFS decoder and scene graph 225 is responsive to any type of recovered object descriptor information which is provided thereto and recovered scene description information <u>for creating a list of said</u>

Serial No.: 09/735,147   **-6-**

specific ones of the recovered multimedia objects that are to be
displayed in said multimedia scene. No such list as claimed by
Applicants is created in Eleftheriadis.

The Examiner apparently indicates that the "library of API's
or instructions (307-312 of Figure 3 and 421-430 of Figure 4)" of
Eleftheriadis are each equivalent to Applicants' claimed list of
specific ones of the recovered multimedia objects that are to be
displayed in the scene (Office Action, page 8). The "library of
API's" of Eleftheriadis is not created from recovered object
descriptor information and recovered scene description
information as is Applicants' claimed list. Rather, the "library
of API's" of Eleftheriadis is a listing of application program
interfaces. Further, the "instructions" 307-312 and 421-430 of
Eleftheriadis are disclosed only as being separate control lines.

Applicant respectfully submits that there is no disclosure
or remote suggestion anywhere in Eleftheriadis of the creation of
a list of specific ones of multimedia objects or that such a list
is communicated from the composition engine to the presentation
engine for use by a presentation engine to retrieve the decoded
multimedia objects from the decoders, as set forth in Applicant's
claims.

In summary, Eleftheriadis does not disclose or remotely
suggest the following features of Applicant's claims:

- The recovery of object descriptor information that
  associates recovered multimedia objects with respective
  ones of the elementary stream;

- Providing the recovered object descriptor information
  from a terminal manager to a composition engine;

- The creation of a list of specific ones of the recovered
  multimedia objects that are to be displayed in the
  multimedia scene; and

- A composition engine which is responsive to the recovered
  object descriptor information sent from the terminal

Serial No.: 09/735,147   -7-

   manager and scene descriptor information recovered at the
   composition engine for creating the list of the specific
   ones of the multimedia objects.

   As Eleftheriadis does not disclose each and every element of
the invention as claimed by Applicants, the rejections under 35
U.S.C. § 102(e) are believed to be improper, and withdrawal of
the rejections is respectfully requested. See, *Akamai
Technologies Inc., supra.*
   Applicants respectfully submit that the present invention is
not anticipated or rendered obvious by Eleftheriadis, taken alone
or in combination with any of the other prior art of record.
   Further remarks regarding the asserted relationship between
Applicants' claims and the prior art are not deemed necessary, in
view of the above discussion. Applicants' silence as to any of
the Examiner's comments is not indicative of an acquiescence to
the stated grounds of rejection.
   Withdrawal of the rejections under 35 U.S.C. § 102(e) is
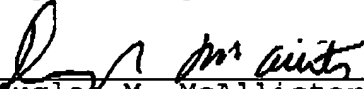therefore respectfully requested.

Serial No.: 09/735,147   -8-

Conclusion

    In view of the above, the Examiner is respectfully requested to reconsider this application, allow each of the presently pending claims, and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,

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ATTORNEY DOCKET NO.: GIC-531
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